Surface-Mount Lowpass Filter · DC–550 MHz

Use the 50 Ω surface-mount footprint. Check the land pattern and the 18.8 × 11.18 × 6.86 mm package before laying out the board.

RF Performance

Parameter	Value
Passband	DC–550 MHz
Passband Insertion Loss [1]	≤1.0 dB
Stopband Rejection [2]	≥20 dB
Stopband Rejection [3]	≥35 dB
VSWR [1]	1.2:1 (Typical)
Frequency at −3 dB	605 MHz

[1] DC–550 MHz
[2] 800–1050 MHz
[3] 1050–2000 MHz

Design Ratings

Guaranteed by design

Parameter	Value
Power Handling	0.5 W
Operating Temperature	−40...+85 °C
Storage Temperature	−55...+100 °C

Typical measured response

Frequency (MHz)	S11 VSWR	S22 VSWR	S12 loss (dB)	S12 delay (ns)
0.01	1.01	1.01	-0.05	1.48
57	1.01	1.01	-0.05	1.48
114	1.11	1.11	-0.11	1.54
171	1.11	1.11	-0.13	1.57
229	1.09	1.08	-0.14	1.63
286	1.03	1.03	-0.17	1.7
343	1.04	1.06	-0.21	1.81
400	1.07	1.1	-0.24	1.93
457	1.08	1.1	-0.3	2.13
514	1.14	1.13	-0.41	3.3

Typical measured response

Frequency (MHz)	S11 VSWR	S22 VSWR	S12 loss (dB)	S12 delay (ns)
571	1.07	1.08	-0.51	3.91
629	2.29	2.32	-1.51	2.7
686	9.29	9.38	-6.72	1.35
743	25.3	23.54	-13.22	1.16
800	42.03	39.14	-20.93	1.2

Mechanical Specifications

Parameter	Value
Package Dimensions	18.8 ±0.2 × 11.18 ±0.2 × 6.86 ±0.2 mm
RF Impedance	50 Ω
Mounting	Surface Mount
RF Pins	1, 8
Ground Pins	2, 3, 4, 5, 6, 7
Quality Grade	Industrial
Solder Pad Size	1.52 × 1.4 mm
Adjacent Pad Center Pitch Along a Row	5.08 mm
Pad Array Outside Dimensions	16.76 × 11.94 mm

PCB Installation

Clean the product surface without immersing the filter in cleaning liquid. Reflow soldering at 190 °C is supported. The PCB land pattern has two rows of four pads. Viewed from the underside with terminal 1 at upper left, the upper row is 1, 3, 5, 7 and the lower row is 2, 4, 6, 8. Terminals 1 and 8 are the RF input/output ports. Terminals 2 through 7 connect to ground. In the underside view, the terminal 1 recess is 1.52 mm wide and extends 1.02 mm inward from the upper edge. The terminal 2 and 4 centers are 5.08 mm apart. The terminal 2 center is 1.78 mm from the left edge. The terminal 8 metallization extends 3.54 mm inward from the right edge and 2.22 mm inward from the lower edge.

Document notice

Specifications are subject to revision. Before design release, confirm the current document revision and product-specific requirements with LCRF. The approved quotation and order documentation define the supplied configuration.